

## Claims:

1. A cleaning, disinfection, and indicator agent containing a water-soluble permanganate, in particular for admixing with an agent for ensuring an alkaline milieu having a pH value of at least 11, characterized in that, in addition to the water-soluble permanganate, it comprises:
  - a further oxidizing agent, whose oxidation potential is above that of manganese VII to manganese VI,
  - pH buffer substances, preferably primary and/or secondary alkali carbonates such as sodium carbonate and/or sodium hydrogen carbonate, and
  - oxidation-resistant polyphosphates.
2. The cleaning, disinfection, and indicator agent according to Claim 1, characterized in that the oxidation potential of the further oxidizing agent is above that of  $\text{HO}_2^-$  to  $\text{OH}^-$ .
3. The cleaning, disinfection, and indicator agent according to Claim 1 or 2, characterized in that the further oxidizing agent is a persulfate, preferably a peroxodisulfate.
4. The cleaning, disinfection, and indicator agent according to Claim 3, characterized in that the peroxodisulfate is sodium peroxodisulfate.
5. The cleaning, disinfection, and indicator agent according to one of Claims 1 through 4, characterized in that the permanganate is potassium permanganate.
6. The cleaning, disinfection, and indicator agent according to one of Claims 1 through 5, characterized in that it contains sodium tripolyphosphate as the oxidation-resistant polyphosphate.

7. The cleaning, disinfection, and indicator agent according to one of Claims 1 through 6, characterized in that it contains sodium hexametaphosphate as the oxidation-resistant polyphosphate.
8. The cleaning, disinfection, and indicator agent according to one of Claims 1 through 7, characterized in that it has the following composition:
  - 3-5% sodium peroxodisulfate, preferably 4%
  - 0.06-0.08% potassium permanganate, preferably 0.07%
  - 5-7% sodium tripolyphosphate, preferably 6%
  - 9-11% sodium hexametaphosphate, preferably 10%
  - 2.0-3.0%, preferably 2.6%, of a mixture of sodium carbonate and sodium hydrogen carbonate, preferably in the ratio 3:1.
9. A method for cleaning, disinfecting, and monitoring the cleanliness of commercial and industrial plants or plant components, characterized in that in a first step, a cleaning, disinfection, and indicator agent comprising
  - a water-soluble permanganate,
  - a further oxidizing agent, whose oxidation potential is above that of manganese VII to manganese VI,
  - pH buffer substances, preferably primary and/or secondary alkali carbonates such as sodium carbonate and/or sodium hydrogen carbonate, as well as
  - oxidation-resistant polyphosphates

is combined in aqueous solution with an agent for ensuring an alkaline milieu having a pH value of at least 11, preferably at least 12, in a second step, the solution thus obtained is circulated through the plants or plant components to be cleaned and/or disinfected and the cleaning progress is

tracked by ascertaining the intensity of the light emitted in the violet wavelength range by the solution.

10. The method according to Claim 9, characterized in that the cleaning progress is additionally tracked by ascertaining the intensity of the light emitted in the green and yellow wavelength ranges by the solution.
11. A method for cleaning, disinfecting, and monitoring the cleanliness of commercial and industrial plants or plant components, in which an aqueous solution having a pH value of at least 11, preferably at least 12, is circulated through the plants or plant components to be cleaned and/or disinfected, characterized in that during the circulation, a cleaning, disinfection, and indicator agent comprising
  - a water-soluble permanganate,
  - a further oxidizing agent, whose oxidation potential is above that of manganese VII to manganese VI,
  - pH buffer substances, preferably primary and/or secondary alkali carbonates such as sodium carbonate and/or sodium hydrogen carbonate, as well as
  - oxidation-resistant polyphosphatesis admixed and the cleaning progress is tracked by ascertaining the intensity of the light emitted in the violet wavelength range by the admixed cleaning, disinfection, and indicator agent.
12. The method according to Claim 11, characterized in that the cleaning progress is additionally tracked by ascertaining the intensity of the light emitted in the green and/or yellow wavelength ranges by the admixed cleaning, disinfection, and indicator agent.

13. The method according to one of Claims 9 to 12, characterized in that the cleaning, disinfection, and indicator agent has the following composition:
- 3-5% sodium peroxodisulfate, preferably 4%
  - 0.06-0.08% potassium permanganate, preferably 0.07%
  - 5-7% sodium tripolyphosphate, preferably 6%
  - 9-11% sodium hexametaphosphate, preferably 10%
  - 2.0-3.0%, preferably 2.6%, of a mixture of sodium carbonate and sodium hydrogen carbonate, preferably in the ratio 3:1.
14. The method according to one of Claims 9 to 13, characterized in that the light intensity is ascertained automatically.
15. The method according to one of Claims 9 to 14, characterized in that the removed contaminant load is calculated from the intensity change of the light emitted and the quantity of the cleaning, disinfection, and indicator agent used.
16. A use of a solution made of a cleaning, disinfection, and indicator agent comprising
- a water-soluble permanganate,
  - a further oxidizing agent, whose oxidation potential is above that of manganese VII to manganese VI,
  - pH buffer substances, preferably primary and/or secondary alkali carbonates such as sodium carbonate and/or sodium hydrogen carbonate, as well as
  - oxidation-resistant polyphosphates

and an agent for ensuring an alkaline milieu having a pH value of at least 11, preferably at least 12, as an indicator solution for ascertaining the cleanliness of commercial and industrial plants or plant components by ascertaining the

intensity of the light emitted in the violet wavelength range by the solution.

17. The use of a solution according to Claim 16 as an indicator solution for ascertaining the cleanliness of commercial and industrial plants or plant components by ascertaining the intensity of the light emitted in the green and/or yellow wavelength ranges by the solution.